



WOODBURY County Court House, Sioux City, Iowa. Built 1917. First American Public Building as Organic Architecture. William L. Steele, Architect with Purcell and Elmslie, Associates.

NORTHWEST ARCHITECT

JANUARY-FEBRUARY 1951

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HISTORY

MEN WHO BRING events to birth, who produce works that prove to have life, who anticipate in action the, as yet, unarticulated need, are more likely to be far-ranging explorers than library bound inventors.

Originality is not the important requirement. Originality is only the later surprise registered by plodding, starterless critics. With novelty and innovation, as such, creative man is unconcerned. Freedom is his climate and integrity his only path.

Thus the earliest record of a seed idea, as seen in its first materializing, is important only because it reveals where some penetrating experiment has been made to work. From such first practical examples can then be more easily traced; the sequences by which, through exfoliating minds the idea came to accomplish its full potential or more often has been missed entirely in slap applications by merchants of the meretricious.

W. G. P.

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You have often said, "Actions speak louder than words." People now talk fearfully about "The SHAPE of things to come." Shape! Action! Speech! Join with us and let's examine this Word-of-the-Month . . .

"Say it all, Mr. Architect!"

Practical people like to use their well tempered minds—only "intellectuals" fail to enjoy and understand good, plain thinking.

FORM is a new kind of language talking to you. The following article asks you to look at Architecture not as just another "do-I-like-it." We propose that, for the time being, you take a vacation from expressing your feelings. Listen to what buildings, their details and characteristics are saying. Here is a study of ARCHITECTURE SPEAKING.

by WILLIAM GRAY PURCELL

BEHIND EVERY OBJECT you see, living or inanimate, back of everything you use, stands an idea which this object, tool, or furniture aims to exactly represent and embody. When you look at these familiar things you assume that they do so represent and embody the idea. But if you proceed beyond looking you are at once obliged to deal with unexpected demands. You must pay much more for the thrill of your new piano than the dollars which put it in your home. You now don't own the piano. The piano really owns you. No material object is really *inanimate*. At the very least it receives your action. Seemingly dead things can also both generate and promote actions. Buildings, furniture, machines come alive *for us* only by their action. And so we quickly find, that despite fair plans and great hopes, it is the *working* of everything which is more real than possession of their material shapes. It is a "*verb*" world in which we live, not a "*noun*" world and, I was about to say, also not an "*adjective*" world—but there is "national advertising!" a world of Hollywood fantasy, increasingly disrelated to anything but itself, a hectic world where all is the violent activity of tokens, while life as actuality slowly submerges.

YOU MAY BE SURPRISED to find that all I ask you to look at in this piece is actually very familiar to everyone. You have taken all this for granted, have lived by these facts. They are so plain and simple that it is very difficult to say them understandably. But here goes:

PRIMITIVE MAN discovered how to produce fire where there was no fire. That was the first world moving invention. It took perhaps twenty-thousand

years to take the next step, the manufacture of power. Power was no *thing*, no object, no tool or machine, it was a potent idea, a method, a procedure with no end of variations. In trying to think usefully and practically about such matters anyone can see that *nouns* are names for static, material objects and *verbs* are the living reality. The reality, *the doing* comes first. So that we can say that **nouns are the ashes of verbs**. Action always has a shape. Everyone knows this. People act on this knowledge. And they so talk about what they do. Business men say "We have the know-how so we are in good shape to do the job," or "Give it the works!"

SUCH ARE THE FACTS which the following discussion is intended to illustrate in a very practical way. What I wish to define for you is a method that will expedite all kinds of work, which will save money, time, labor, improve communication, establish satisfaction.

THE VARIOUS WAYS in which people give and share ideas with one another have been pretty thoroughly explored, excepting only idea exchange by means of the shapes-of-things-in-action, that is to say, the speech of architectural forms. Because we will be talking about architecture, when we say "action," "things-in-action" it is *potential* action that will generally be meant. So we ought not to be surprised to find that "things" are a congregation of materials and arrangements which (1) may have, only for the time being, ceased to move, or are not intended to move, or (2) are getting ready *to go into action*, or (3) they *respond* in many ways to the actions of other

things—both people and other objects, tools, or machines.

You well know how anything you own and have used a long time, how any place you live, takes on personal qualities. All such "inanimates" have a life of which you are deeply aware. You give such things friendly names—Tin Lizzy, Pokey, Old Nick, Mom's Shack, Possum Hollow. Your very own possessions differ from every other, no matter how outwardly similar. Children endow play-sticks with every kind of living personality. So, you see, I am looking, with you, not at strange wordy intellectual abstractions, but at experiences of the heart, known to everybody, mutually understood around the world regardless of diverse "tongues."

The study of this whole field of the "Statics and Dynamics of Architecture" has been scarcely touched upon by scholars. My partner, Mr. George Grant Elmslie, F.A.I.A., and I, wrote under this title in 1913 and the piece was used as the introduction to the first of three special numbers devoted to the work of PURCELL, FEICK AND ELMSLIE by the *WESTERN ARCHITECT, in January, 1913.

Other than this the whole subject seems to have been given little attention until recently when the wide spread interest in Korzybski's philosophy of General Semantics and the "meaning, of meaning in words began to show architects how important it is to give heed to the meaning, of meaning-by-forms"—by the messages of the parts and of the whole of buildings, as a powerful new kind of speech.

It is true that since about 1936, even in architectural schools, an increasing amount of attention has been given to Architect Louis H. Sullivan's theory of "form and function." But practicing architects in demonstrating this idea in the building arts, have largely overlooked, or left to chance, the opportunity at hand for communication of significant *general thoughts and feelings*, over and above the candid treatment of construction.

IN ARCHITECTURE the functions of building construction and engineering assembly, of protection against the elements, of convenience, economy, economic objectives, tax pressures and so on, have all been given a very careful study, with consequent registry in the character and appearance of buildings.

BUT IN ALL THIS RESEARCH the old aphorism of Victor Hugo that "architecture is *what a building does to you* when you look at it," has had less and less attention. Architects in making designs just have not been wholly aware of what their finished work was

THESE THREE NUMBERS are comparatively early records of organic indigenous American architecture of the machine age. No little credit is due to Robert Craik McLean, Editor, and Edward E. Purdy, owner of WESTERN ARCHITECT, then published in Minneapolis, for having the nerve to publish this "radical" material. They were at once bitterly attacked. The three numbers are Vol. XIX, No. 1, January, 1913; Vol. XXI, No. 1, January, 1915; Vol. XXII, No. 1, July, 1915. They will be found in many Architectural School Libraries and a few public libraries.

The three dwellings shown on this and on following pages marked the beginning of an era, for they were the first to have rooms with fully and immediately-openable all-glass-walls.

ARCHITECT

actually saying! The present fashionable cult of trying to let buildings say just as little as possible about themselves, is not based wholly on modesty. Whether designers know it or not, even the most uncompromising engineers and architectural constructivists, who now incorrectly call themselves "functionalists," will sooner or later have to face the fact that everything they do speaks loudly about their procedures, whether adequate or feeble; about themselves, imaginative or book-mired; about the diverse kinds of men they are.

The competent builder hires a draftsman to lay down well detailed plans for buildings, and he puts up well constructed buildings to meet convenience and finance. More and more often today the builders hire an architect and the architect directs the draftsmen making working drawings. In either case the resulting buildings are bound to say all too much about our culture and aspirations. But between the competent imaginative engineer or practical builder, with their skilled draftsmen, and the creative architect who is a master of expression, is a clean separation where there should be a bridge. It is not sufficient to organize plans for even the best building and then let the result more or less futilely gesticulate its significant meanings to whomever happens to be interested enough to dig them out. The one who creates architecture cannot rest satisfied with a few professional listeners. The architect, like any other creative spirit, must order and dispose the unviolated elements of his building, so that they will *say*, with poetry and drama, *just what is* the significance of the work. The architect must rouse the

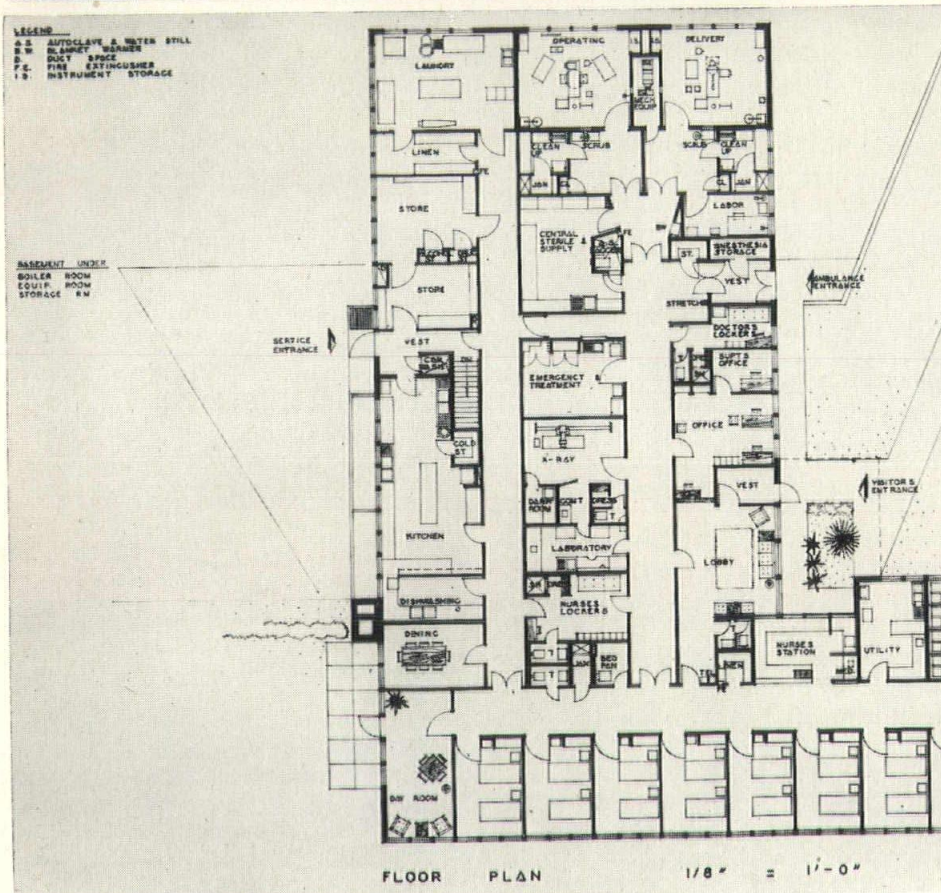
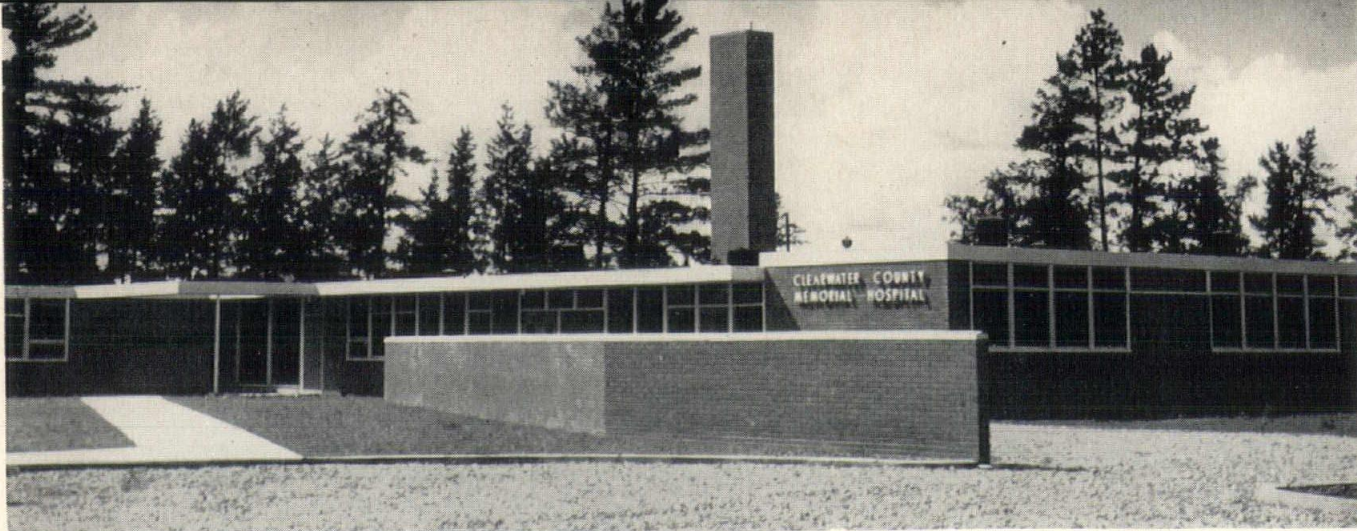
(Continued on Page 25)

"BLUE GATE",

POSSUM HOLLOW, ROSE VALLEY, PENNSYLVANIA

THERE HAD BEEN previous American experiments in plan and design to achieve the sense of free flow between indoors and outdoors. They stopped short of the practical objective by offering only occasional openable sash in very large window areas, or long rows of single door openings whose swinging sash and doors, cluttered the rooms with busy, demanding mill work. In contrast, the glass walls of the house illustrated here and on following pages were easily moved, a one finger push to free the entire opening clean to the floor level, without disturbing the screens or curtains. Details and photographs were published in Northwest Architect, Vol. 6, # 4, March 1942.





CLEARWATER COUNTY MEMORIAL HOSPITAL

Bagley,
Minnesota

Architects:

Long & Thorshov, Inc.
Minneapolis

The main entrance of the Clearwater Hospital is shown above. Note how the low brick wall gives privacy to the ambulance entrance. The architect's plan is shown here also and details of plan and photograph can easily be cross checked.

U. S. Health Service expenditures under the Hill-Burton Act, although recently cut in half, will still amount to \$75,000,000 per year for the next five years. The act was written to provide 1,800,000 beds (other than those in federal hospitals) in communities now without adequate hospital service. To qualify for federal aid, the community must assume a certain percentage of the construction cost and be able to maintain the hospital once it is built.

That even small villages are interested in this unprecedented opportunity is shown by the new 30-bed Clearwater County Memorial Hospital in Bagley, Minn., about 25 miles west of Bemidji. Bagley has a popula-

tion of only 1,650, is in a relatively poor farming area and has no major industry but in order to get adequate hospital facilities the people of Clearwater County raised two-thirds of the \$337,000 needed for the new building and its equipment.

Edward H. Noakes of Long and Thorshov, Inc., architects, Minneapolis, designed the structure, which was honored with "The Hospital of the Month" award by *Modern Hospital* magazine. H. L. Stavn Co., of Hibbing, was general contractor.

Fireproof and ultra-modern in appearance, this beautiful brick building has all the facilities of a large general hospital on a reduced scale. All facilities are provided on one floor, which eliminates costly space-and-time consuming elevators, stairways and dumb-waiters.

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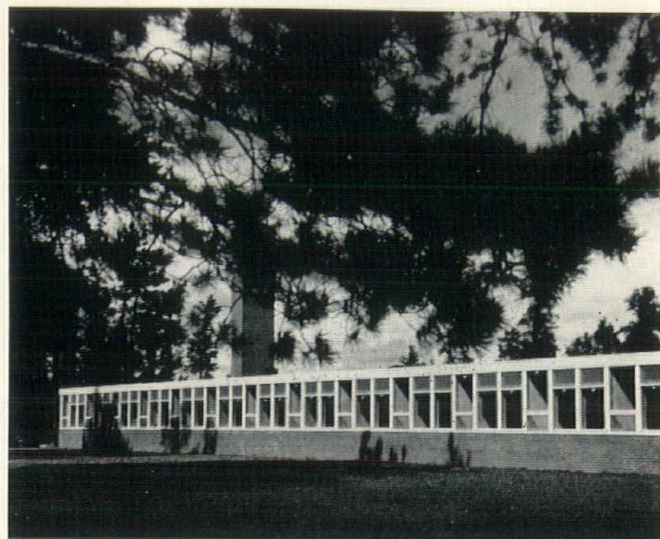
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a wooded promontory overlooking Lake Lomond. One wall in each patient's room is glass from within 3 feet of the floor to the ceiling, giving bed patients an unobstructed view through a grove of pines to the lake beyond. The cheery patients' day room, staff dining room and the kitchen are also oriented towards the lake. With such a view and fresh air, the working environment is excellent and help is neither hard to find nor keep.

The hospital is the first in this region to feature radiant heating. The system, which uses circulating hot water, embodies all the approved principles of eco-



How the architects took advantage of the site for the hospital is readily seen here. A hospital's location can affect its patients and who wouldn't get a lift out of looking out his window at the restful pines so evident above. This is the patients' wing of the Clearwater Hospital.

nomical and efficient construction. To retard heat loss to the ground through the slab and edge loss at foundation walls, the entire floor area is insulated with a 3" thickness of vermiculite concrete, 1:6 mix (1 part Portland cement to 6 parts vermiculite concrete aggregate), placed over a waterproof membrane covering a gravel fill. Copper tubing rests on the vermiculite slab, and is embedded in a sand concrete topping 4" thick. The floor is finished with asphalt tile with two exceptions: the dishwashing and kitchen areas, where it is a grease-proof tile, and the operating and delivery suites, where it is conductive terrazzo. Heat is thermostatically controlled, with the rooms set up in banks, depending on exposure and use. The surface of the slab is regulated to a maximum temperature of 85° to prevent the feeling of "hot" feet.

Pointing out the advantages of radiant heat in hospital construction, Mr. Noakes said, "It reduces cleaning and decorating requirements and adds usable floor space. A convector radiator must be cleaned regularly of dust and dirt. It projects 4" or more from the wall into the room, which means less usable floor area. With a radiant heat floor, there is nothing to contend with in the way of equipment; it simply isn't exposed. There are no radiators to clank and whistle and annoy sick people, patients cannot burn themselves and, from an operating standpoint, we expect to save considerable

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fuel over other types of heating."

Through an underground clay tile pipe distribution system, tempered air is fed into the corridors at strategic points to reduce cold air infiltration at windows and doors and to make up air exhausted from small rooms such as baths and toilets. This effectively reduces the normal sensation of draftiness near windows and makes additional fuel savings.

Poured concrete footings and foundation walls, steel columns and beams, and a structural steel roof deck comprise the construction. Partitions are gypsum block or clay tile. Hard use or wet area wall finish is cement plaster, which is cheaper to apply and repair than glazed tile and has no dirt-catching joints. All windows are double-glazed for comfort and reduced heat loss. Basic noise control is achieved by separating patients' rooms from service, public and ambulance entrances. Noisy areas, such as kitchen, dishwashing, storage, laundry and boiler rooms, are on a separate service corridor with its own entrance. Virtually every room and corridor has an acoustical ceiling.

Laboratory, x-ray, locker, emergency room and central sterile supplies occupy the space between corridors and are mechanically ventilated. These are all rooms in which windows are frequently a nuisance because of requirements for light control, privacy or cleanliness. The cost of outside wall construction was thus eliminated, and heating installation and operating costs substantially reduced.

The kitchen is so close to the nursing corridor that no floor pantry is needed. The nurses' locker room is so close to the nurses' station that a separate nurses' toilet is not required. The most interesting feature of the nursing unit is the location and design of the nurses' station, which permits visual and vocal control of the public entrance and lobby, the ambulance entrance and the nursing unit proper. This is particularly convenient at night when the staff is greatly reduced.

Each patient's room contains 2 beds, and is 11 feet wide and 16 feet deep. This planned spacing allows 2 feet, 6 inches from the wall to the first bed, 3 feet for the bed, 3 feet, 6 inches between beds, 3 feet for the second bed and 1 foot, 18 inches to the sink and the face of the clothes closet, which is 18 inches deep. Closets have double doors, as well as shelves at the top and bottom of the closet for patients' belongings. Each patient controls his own lamp and nurse's call bell and there is space to plug in a telephone. Curtains between beds travel on an overhead track. Instead of Venetian blinds, colorful drapes made by volunteer local women at a considerable saving provide decoration and feeling for the room while giving protection from excess light. Wood trim is natural finished birch.

The reception room is marked by quiet distinction. One wall has painted wood flutes with louvered windows. A latticed overhang above the receptionist's desk gives proper scale for the girl sitting down at her work.

The hospital is so planned and oriented on the land available that an addition can be built as more space becomes necessary. This project proves that small, relatively poor communities can have attractive, modern facilities if they are so minded. A further advantage is that such a hospital serves as an inducement to first-rate doctors.

WEATHER is *No Worry!*

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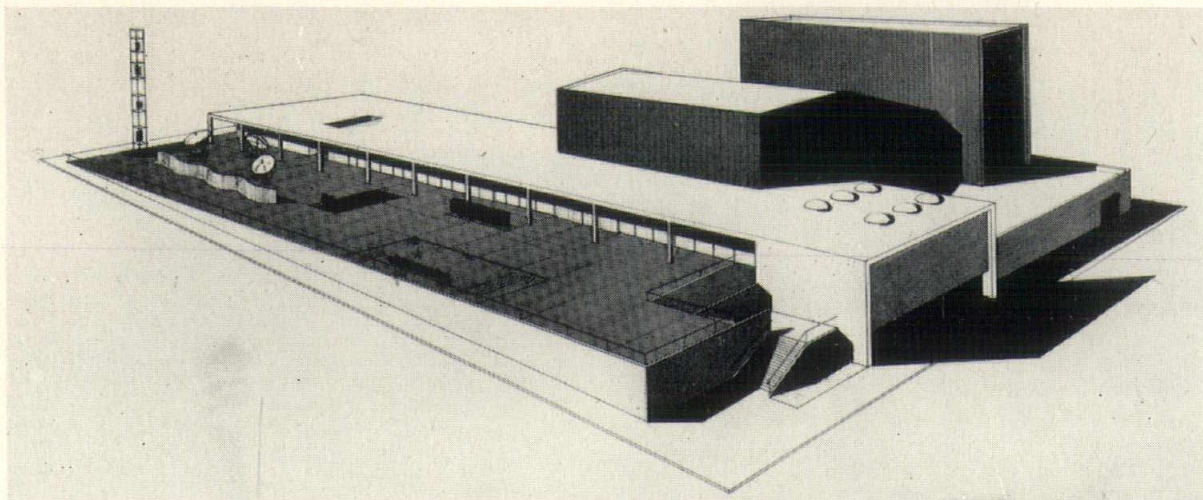
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LEGITIMATE THEATRE

PREMISE

"Despite the dour pronouncement by some that the legitimate theatre in America has been dying for the past fifty years, it will probably continue dying for at least a couple hundred more."

—Robert Edmond Jones

OBJECTIVE

The objective of this thesis is the design of a theatre to house this faltering member of the arts, to succor and revitalize it; at the least, to make its passing as pleasant and comfortable as possible.

THE NEED

The Twin Cities are woefully lacking in facilities to satisfactorily present legitimate theatre for confirmed theatre goers, much less attract a new public. Certainly no one can be expected to cheerfully pay three times a movie admission to be crowded into a barn where only about half the audience can see and hear properly. Who but the most avid theatre patron would not be tempted to accept the even half-rate theatre fare of some motion pictures to be able to sit comfortably and see and hear the entire show?

"For a nation with our proud record of architectural and engineering achievements, we have the worst theatres of any country in the world."

—Jo Mielziner

GENERAL

"Not only can the ideal theatre be built to give every sense of luxury and comfort that the legitimate theatre deserves, but this theatre can be incorporated in an architectural unit capable of earning a healthy return on the investment."

—Jo Mielziner

"It should be possible for the average citizen to go straight from his work to the theatre, where he may meet his friends or relatives waiting for him in the lounge. They may have a good but cheap meal and spend the time until the play begins looking at the exhibitions or, in fine weather, taking the air reclining in

—An Undergraduate Thesis Submitted by Richard Kiebel, Summer of 1950, School of Architecture, University of Minnesota . . .

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comfortable chairs on the terraces overlooking the gardens."

—Richard Leacroft

It is proposed to make this theatre a general entertainment center; and as such, a restaurant, bar, exhibits and other endeavors which will aid in providing a full evening's entertainment in one location will be provided. Additional commercial sites which would aid in making the project economically feasible may be assigned.

The type of theatre fare to be presented will be touring companies of Broadway plays and musicals. It is assumed that Northrup Auditorium and the two municipal auditoriums will be employed for opera, ballet and any large scale presentation shows.

The theatre may be used in off season and open weeks for the presentation of art films, road show motion pictures and public radio and television shows originating in the Twin Cities but, since the requirements for some of these are the very antithesis of legitimate theatre requirements, it must be the secondary functions which must be compromised for the primary consideration of good legitimate theatre.

THE SITE

The site selected is the three-quarters of a block available in downtown St. Paul between Wabasha and Cedar, and Fourth and Fifth. The property is at present owned by the city and is for sale on bid.

Location in the downtown area was chosen for the convenience it afforded both the patrons and the road show personnel. Too, it is hoped that such a site would develop the play-going habit of idle entertainment seek-

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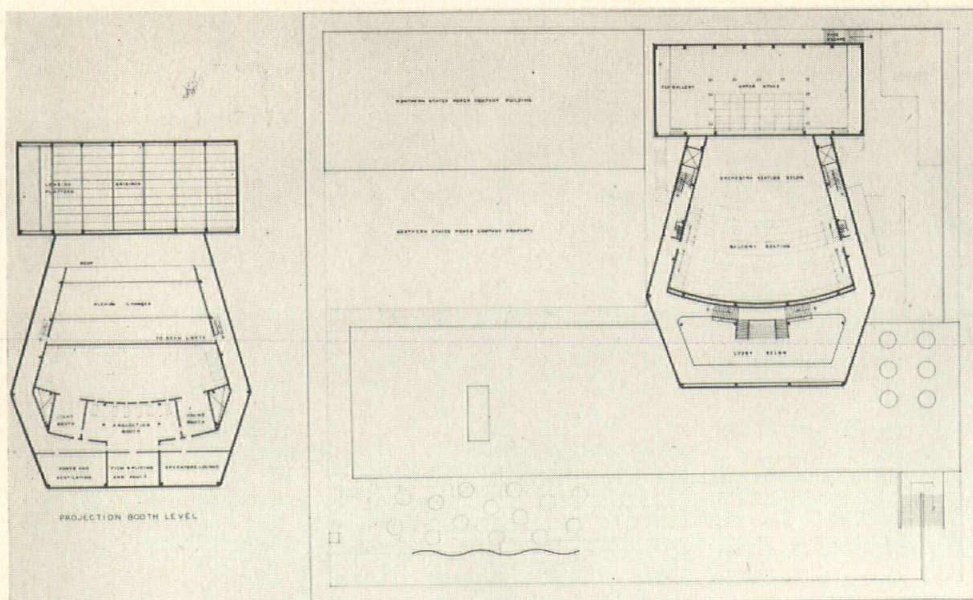
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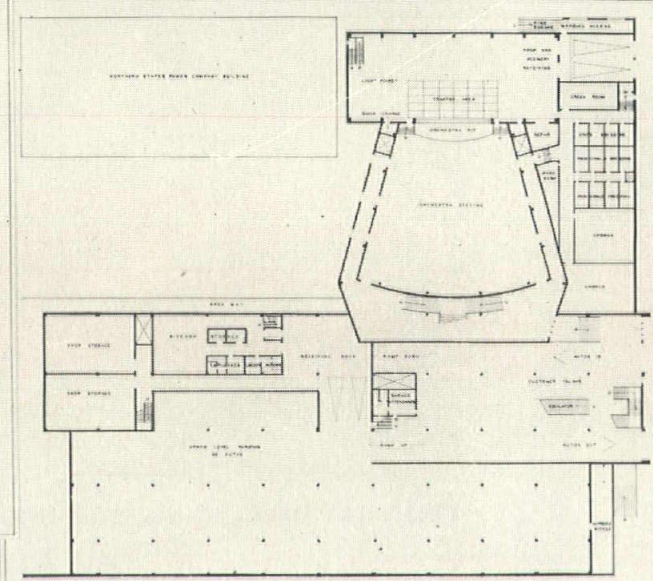
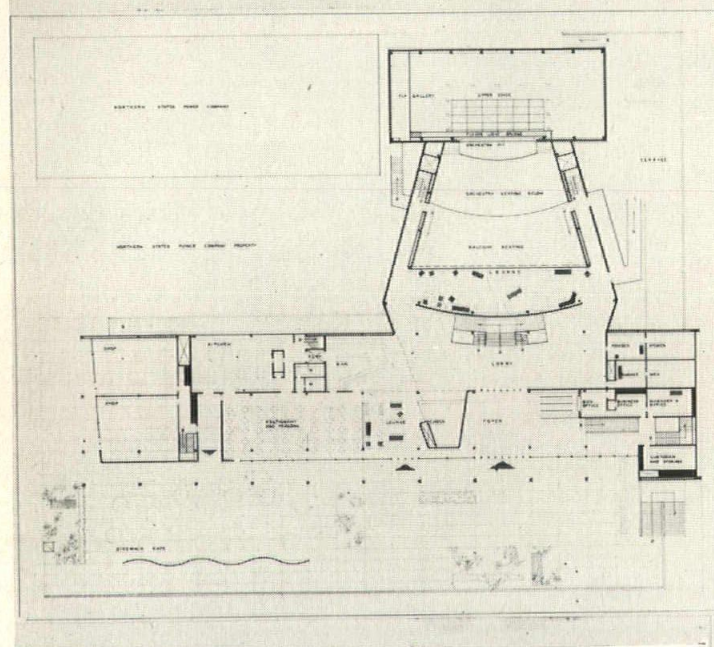
The Plans:

Balcony Level
(at left)

Terrace Level
(left center)

Orchestra Level
(right center)

Lower Level
Parking
(at bottom)

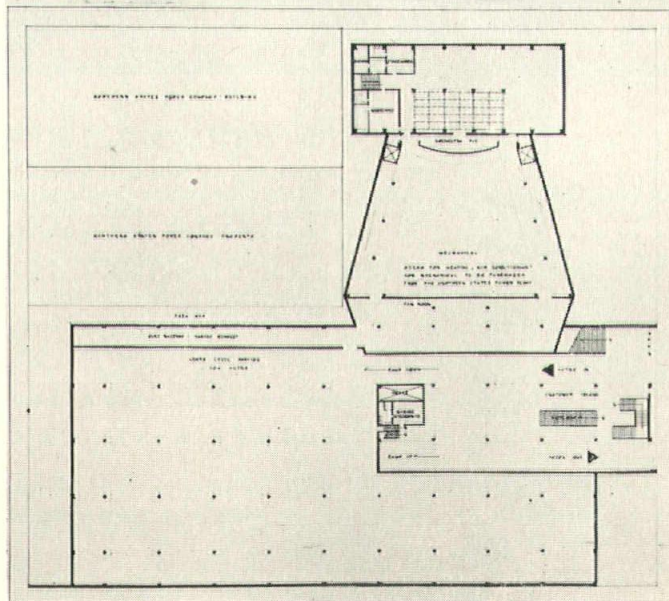


ers who might otherwise never be aware of the theatre.

All factors considered, the site is as ideal as one could possibly hope for. Transportation by streetcar is readily available for all St. Paul and for Minneapolis via the non-transfer lines of Selby-Lake, Como-Harriet and Minneapolis-St. Paul. Adequate automobile access is effected by Kellogg Boulevard and the Capitol Approach on Wabasha. The railroad station is but a few blocks down Fourth Street; this is an invaluable advantage in trouping scenery and personnel. The Lowry Hotel is directly across the street and the Hotel St. Paul a block away for convenient accommodations for the traveling show. Reciprocally, some of the most likely theatre patrons would be located at the hotels, or in the St. Paul Athletic Club, the Commerce Building, the City Hall, the Minnesota Building and Metropolitan Bank Building—all of which border the site.

PARKING

For a general urban area, a large minority arrive at the theatre via public transportation systems and a large minority arrive by owner-driven auto, with the balance arriving by taxi or chauffeur driven auto. Although St. Paul has no ordinance at present requiring parking



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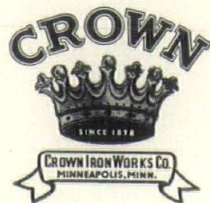
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accommodations for any building constructed in the loop area, it is most desirable that parking be provided on the site. With an average of three theatre patrons per car, there should be a parking allowance for 150 to 200 cars. These parking facilities might well pay for themselves during the business day. Any unforeseen excess of autos could easily be accommodated by the Lowry Garage directly across the street or the Ballard Parking Ramp only one block down Wabasha.

FRONT OF THE HOUSE

"The excitement of the theatre should begin the moment the audience approaches the entrance to the building."

—Jo Mielziner

There must be ample, covered, well-illuminated curb space at least 10 feet wide for discharging theatre patrons rapidly and efficiently.

FOYER

The foyer serves two purposes: it is a meeting place for friends attending the theatre together and it is a ticket sales area. The great majority of theatre tickets are purchased before the evening of the performance, so one ticket window to accommodate those buying immediately preceding the performance and a second window for advance sale and reservations should be adequate. Care must be taken so the ticket queues do not interfere with the direct passage of patrons with previously purchased tickets or with the people waiting for friends. There is more traffic through the foyer than any other part of the theatre. The floor surfaces, therefore, must stand a lot of traffic, must not be stained or rendered hazardous by standing water, must be easily cleaned and must not be uncomfortable to stand on. Wall surfaces must resist defacing to at least shoulder height and be easy to clean.

The junction between wall and floor must be watertight. Doors must be silent and self-closing. Ceiling and upper walls should be of sound absorbent materials. Standard equipment is a portable ticket takers' box and rails at the box office to prevent doubling of lines. The decoration should be cheerful and the illumination should be relatively high and uniform.

Minimum Foyer Area—1200 square feet.

BOX OFFICE

The box office should contain two ticket windows as far apart as practical. Each window is to have a counter, change drawer and an automatic change machine. There should be plenty of wall space for ticket racks, one for the current performance, one for the rest of the current week and one rack for subsequent weeks. The box office also contains telephones, a desk and a safe large enough to hold the ticket racks, the cash box and the ledger. The box office should be connected to the business office if possible.

MANAGER'S OFFICE

This is the nerve center of the theatre building and should be located convenient to the front of the house with means of communication to the stage and control booths. It contains a desk, telephone, files and an intercom system.

Minimum Office Area—100 square feet.

LOBBY

The lobby is the distribution area of the theatre. The ticket taker presides over the entrance. His position should be opposite a portion of the lobby affording short, straight paths to aisles, staircases and elevators. For safety's sake, doors must occupy the whole wall be-

tween the foyer and lobby. The lobby must be quiet. The floors must be carpeted and the ceiling and walls sound absorbent. Lighting should be warm and generally a little lower in intensity than the foyer in order to prepare the patron for the yet more lowly illuminated auditorium.

Minimum Lobby Area—2200 square feet.

COATROOM

The coatroom should open off the lobby to the right as the patron enters from the foyer and where the entering line will pass it before dividing. There should be adequate counter space for six attendants to facilitate the rapid checking and discharge of wraps.

LOUNGE

The lounge is the relaxation area for the audience during intermissions. It is best located to the right of the lobby as the audience leaves the house. It contains the bar, telephones, water coolers and entrances to the lavatories. Furnishings include deeply upholstered chairs and cigarette receptacles. Floor, wall and ceiling treatment should be similar to those in the lobby. Lighting may vary in intensity, with highest illumination at the lounge entrance and exit, lavatory entrances and the bar area.

Minimum Lounge Area—7200 square feet.

LAVATORIES

The lavatories are best located to the left and right of the entrance from the lounge. They should contain, as buffers, a powder room for women and a smoking room for men. The powder room should contain at least two dressing tables. The women's lavatory should have six

toilets and six basins. The men's room should contain six urinals, three toilets and four basins.

AUDITORIUM

It is most important that the auditorium should suggest in every feature of its design a feeling of pleasure, warmth and theatricallity. Every member of the audience shall be able to see the whole of the acting area. Every member shall be close enough to the actor to establish the necessary feeling of rapport which good theatre demands.

A capacity of 1,000 to 1,200 is a compromise between the ideal house for drama and the ideal house for musicals and box office receipts. It is a size that can be economically staffed. Provisions should be made for cutting down the size of the house (in width for film presentation and in depth for intimate drama or half filled houses.) It is disastrous for both actor and audience to act and react in a half filled house.

Continental seating is preferred because it does not split the audience. A fan shaped auditorium approaching the amphitheatre type will provide the most people with an intimate relationship to the stage and to each other.

Comfort in the house depends on—1. shape and upholstery of the seats and the distance between rows; 2. temperature, humidity and freshness of air; 3. position and width of aisles; 4. house lighting; 5. decoration; 6. floor slope; and 7. absence of distraction. Seats should be flat backed, upholstered, comfortable but not so luxurious as to make the patron relax to the point of inattentiveness. The auditorium as well as the whole building should be air conditioned. Lighting should be

(Continued on Page 32)

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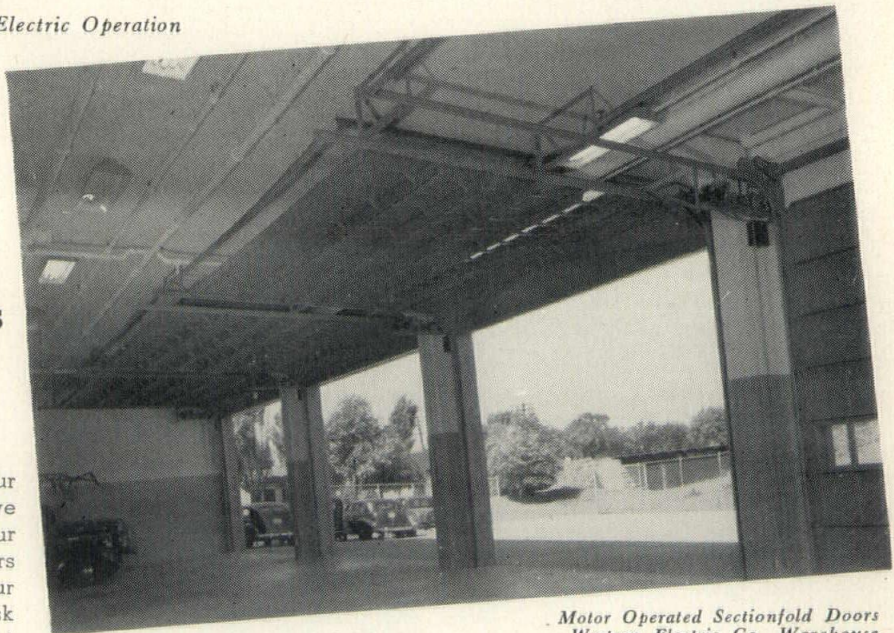
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ILLUMINATING ENGINEERING SOCIETY

ANNOUNCES AWARDS IN PRIZE PROBLEM

Suitability and flexibility were the keynotes in the solutions this year to the I. E. S. architectural prize problem given at the University of Minnesota.

With a very interesting problem to work with a small town, historical museum, the students came up with ideas that would do justice to the most experienced designers.

For instance, the first prize winner, Richard Soderlind of Minneapolis, used a series of modular luminous panels in the main gallery which could be interchanged with acoustical panels. This allowed the brightness pattern in the area to vary with the changes in exhibits. Adjustable spot lamps were used to provide further accents and modeling.

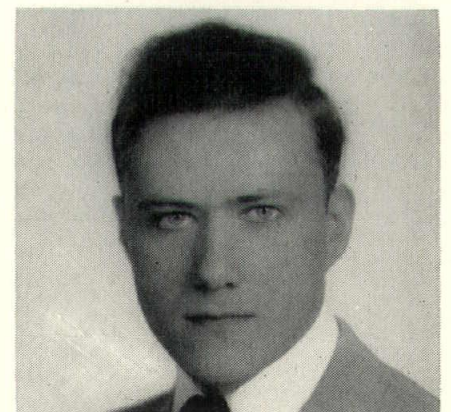
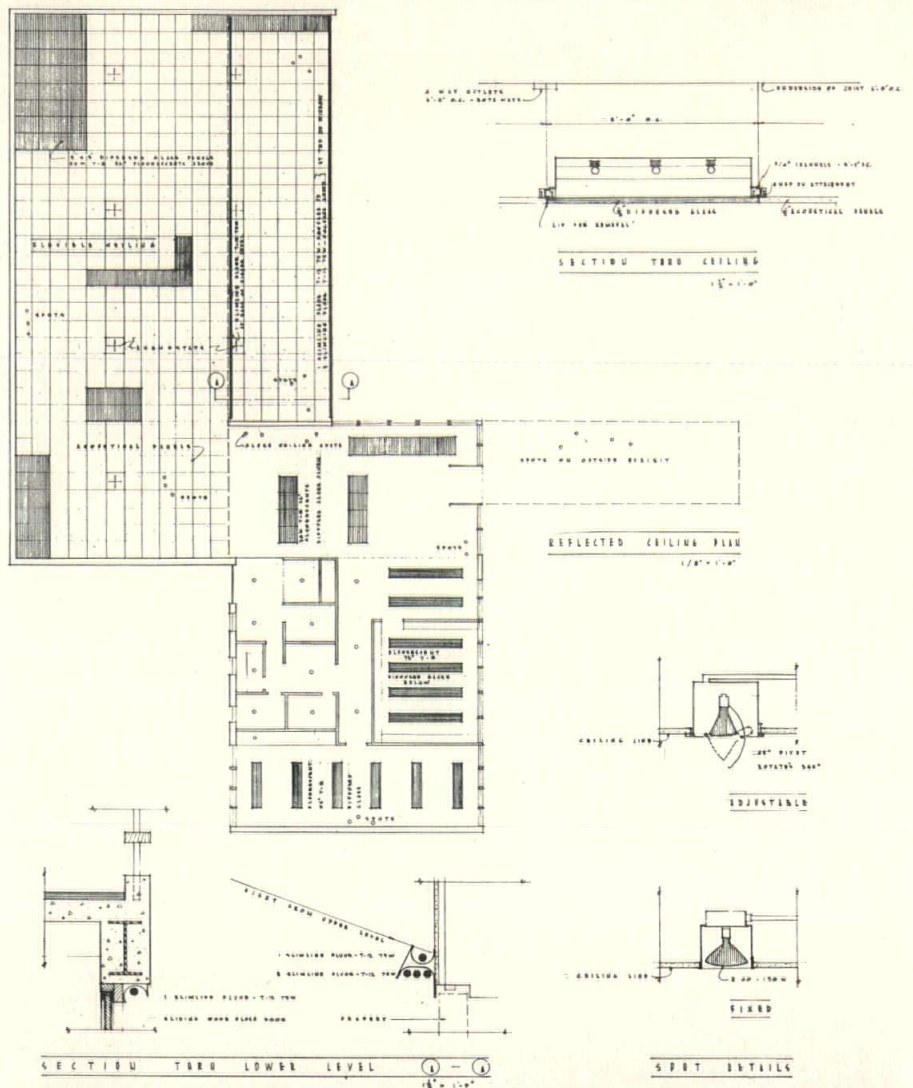
The lighting of a display area viewed from above as well as below called for lighting which would provide good brightness for the display with a luminous surround. This was well handled by a double cove—adequately shielded to prevent glare.

Office and service areas were simply and appropriately lighted for the tasks involved.

Mr. Soderlind received the cash prize award of \$85 and a student membership to the Illuminating Engineering Society. Other winners who received student memberships were: Foster Dunwiddie of Minneapolis, Daniel Pates of St. Paul, Sheldon Anonsen of St. Paul and Robert Sperl of St. Paul.

This competition is sponsored annually by the Twin City Section of the I. E. S. and is given to encourage original thinking and functional approach to the solution of lighting problems.

The first prize winning plan is shown at the top of the page. Below at left are shown Messrs. Soderlind (left) and Norman Nagle, assistant professor of senior design at the university, who was in charge of the project, studying the plan. The group picture is of the winners who are, left to right, Messrs. Pates, Nagle, Sperl, Dun-

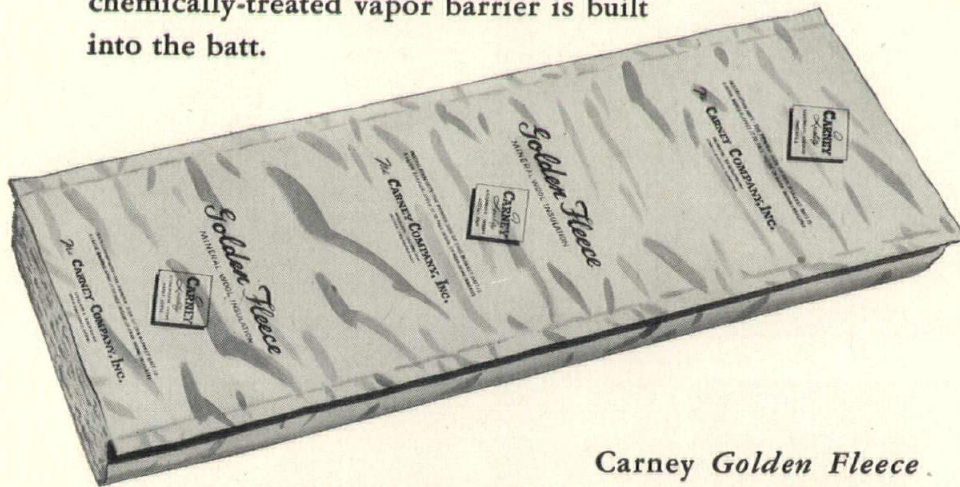


widdie and Soderlind. Missing from that group is Mr. Anonsen shown in the lower portrait.

CARNEY Golden Fleece

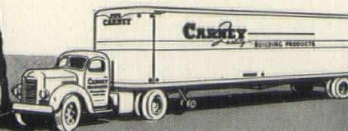
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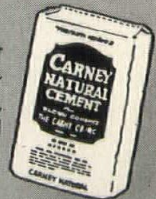
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EASILY CARRIED DRAWING BOARD SPEEDS FIELD WORK

A light, plastic drawing board which is easily carried in the field and yet has all the required equipment to make precise drawings has

been placed on the market as the Graphostat Precision Drawing Board by the A. Patrick Co., 9 Grove St., Westwood, N. J.

The board and its gear weigh less than 8 ounces, it takes an 8½ by 11-inch sheet, has two metal straight

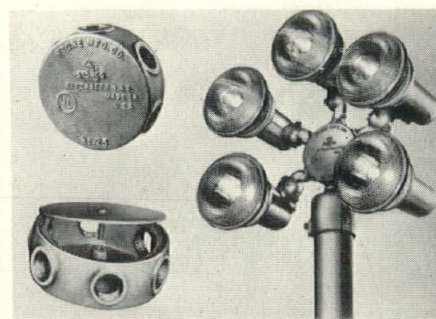
edges, one vertical and the other horizontal, and triangles which stow on the back of the board under clamps. The board can also be used at the desk, rubber feet holding it steady.

Price of the board is \$3.95, post-paid.

STONE ANNOUNCES CLUSTER LIGHTS FOR OUTDOOR USE

A cluster box for outdoor protective and other lighting, with features valuable in wartime use, has been announced by the Stone Manufacturing Co., Elizabeth 4, N. J.

The cluster will accommodate up to five lampholders. It is made of aluminum alloys which will con-



serve use of this metal while not sacrificing strength. A weathertight cap allows instant access to interior wiring and the holes in the cluster are tapped ½-inch IPS to take one to five standard holders for 150-, 200- and 300-watt reflector bulbs.

The cluster can be wall or pole mounted. Makers point out that in protective lighting, a cluster will continue to give light even though one or several lights burn out, but a single outdoor flood, when it burns out, darkens its whole area of coverage.

PLASTIC SOLVES SKYLIGHT LIGHT CRACKING PROBLEM

Long skylights which were cranked open and closed with so much resulting strain that wired glass panes cracked have been refitted with translucent white Plexiglass at the Chester, Pa., post office.

The plastic panels, each one of which is 2 feet wide, 5 feet long and ¼ inch thick, have enough strength and resiliency to prevent shattering. The translucent panels also diffuse light to the office working spaces below.

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For hospitals, clinics and public institutions in general, ROMANY offers an exceptionally desirable wall surface. For ROMANY is real clay tile. Its hard glazed surface assures extra durability. Its colors are everlasting. And, no surface is easier to clean, more completely sanitary than ROMANY. For corridors, for rest rooms, for kitchens and dining rooms, wherever color and wear and ease of cleaning are wanted, there's no tile like real clay tile, and ROMANY is real clay tile.

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NU-WOOD ADDS ACOUSTICAL TILE

Wood Conversion Company has announced addition of a Nu-Wood Acoustical Tile to its line of interior finish products, with distribution to be through its established channels of lumber companies.

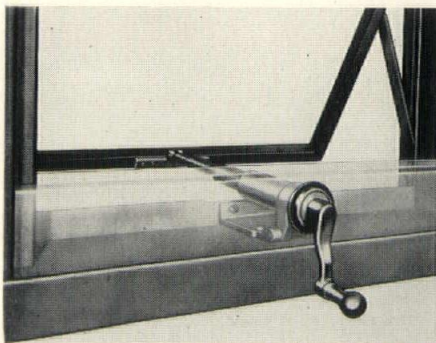
The new tile has tongue and groove edges and can be used with the Nu-Wood reversible clip. In addition to the precision drilled holes in each tile, the fiber material itself contains thousands of tiny sound absorbing cells, makers reported.

Surface of the new tiles is Sta-Lite, predecorated at the factory. Any of the four usual installation methods can be used with the acousticals—Nu-Wood clips, adhesive, nails or screws. Tiles are 12 by 12 inches, 1/2-inch thick.

TELESCOPING ADJUSTER MADE FOR FENESTRA AWNING WINDOWS

A telescoping feature has been engineered into a new window adjuster by Detroit Steel Products Co., which allows operation of awning type windows without opening detention and other kinds of screening covering them on the inside.

The adjuster is available in patterns for all types of awning type window installations. Made of solid



bronze, the case has four telescoping screws with machine-cut threads for precise operation. The bronze crank handle is removable and can be replaced by a direct pole or a chain wheel when windows are out of reach from the floor.

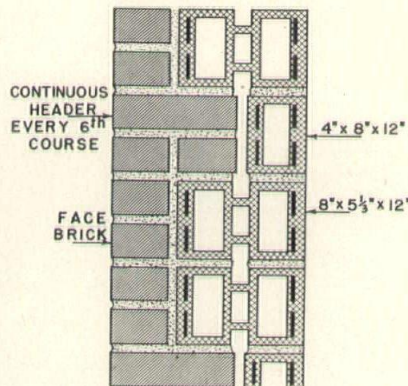
Fenestra Awning Windows are used principally in fresh air camps, hospitals and other buildings requiring weather protected ventilation. Added information can be had from the maker at 3197 Griffin St., Detroit 11, Mich.

ARCHITECT

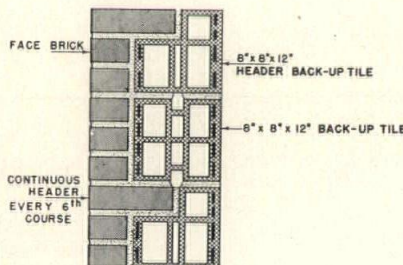
Structural CLAY TILE

One of the most widely used structural clay tile is the tested and proven, load-bearing clay tile back-up unit. In this area it is manufactured by SCPI member-manufacturers to meet the rigid requirements of A.S.T.M. Specification C-34-49.

These wall sections illustrate the use of this dependable unit in 12" wall assemblies. At top is shown a wall using the 85BU or 8" x 5" x 12" back-up unit giving a 6th course. The 45BU or 4" x 5" x 12" unit allows for bonding in the header unit.



12" BRICK & TILE WALL



12" BRICK & TILE WALL

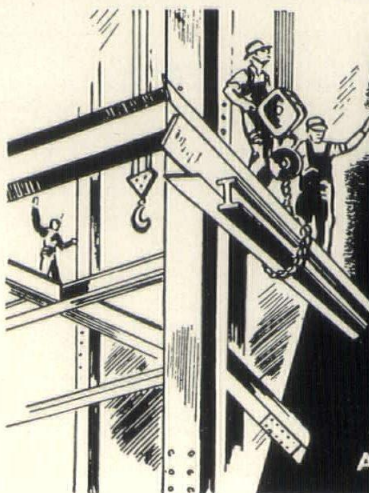
The lower section illustrates the use of the 88BU, 8" x 8" x 12" back-up unit. Each alternate unit is especially recessed to receive the 6th course brick header. These units offer maximum economy in 12" wall construction.

Interior faces are smooth, scored, combed or roughened for application of plaster or paint. Textured or smooth faces are also available for economical, exposed face tile interiors.

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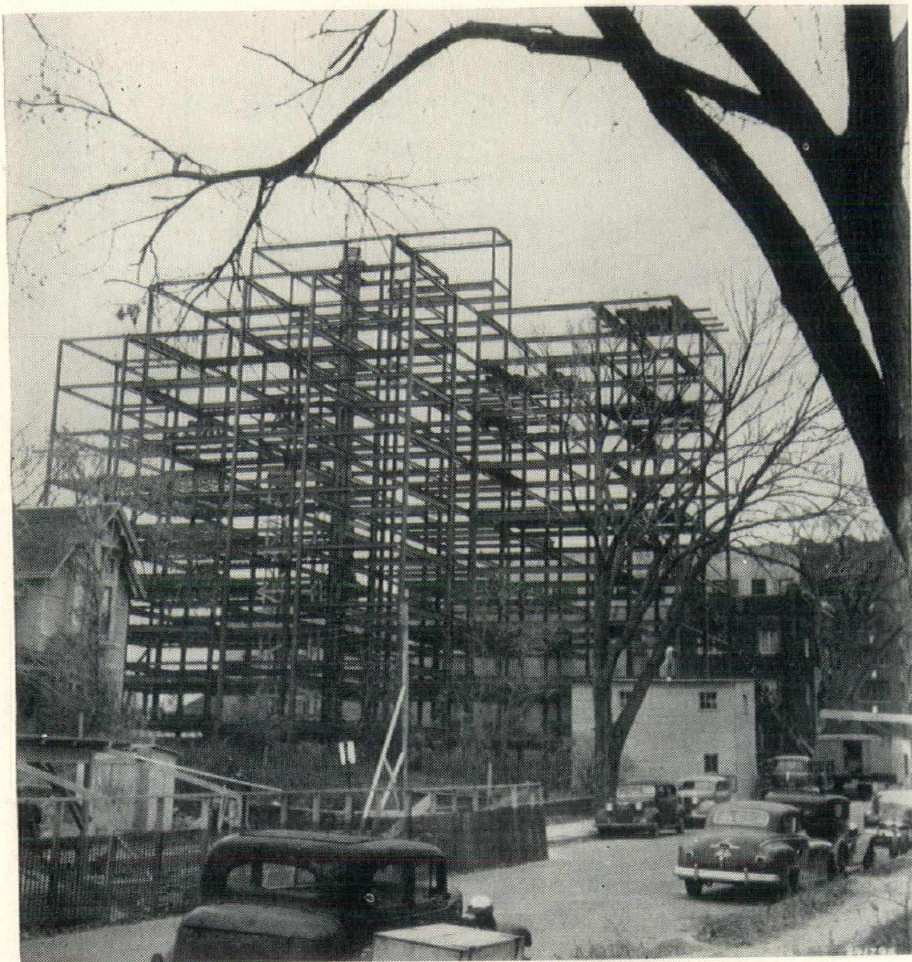
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**SMALL HOMES COUNCIL
DEVELOPS ROOM-UNIT
PLANNING**

Unit planning using four basic home need areas—living-dining, work, sleeping and garage—from which a basic house layout can be derived for best utilization of any lot has been given extended study at the University of Illinois' Small Homes Council and results are set forth in the council's new publication, "Contemporary Houses Developed From Room Units."

Twenty-eight house plans derived from use of the basic room units are also shown in the 62-page book. The publication can be obtained from the council offices in Urbana-Champaign, Ill. Price is \$1.00.

**DRIVE-IN THEATER HAS
WALK-IN SEATING
SECTION**

To accommodate those persons who want to walk into a drive-in theater without their cars, the El Rancho Theater in San Jose, Cal., has built a glass fronted battery of seats. Regular theater seats are fitted into the modern design, wood panelled battery, which is walled against the weather. Design allows for taking admissions from those with and without cars.

**TIPS AND INSPIRATIONS
—STAINLESS STEELS**

Inspiration for the use of stainless steels in architectural design is the newly published "Architectural Uses of the Stainless Steels," 32-page booklet of the American Iron and Steel Institute.

The booklet, available through the institute's office, 350 Fifth Ave., New York City, has more than 75

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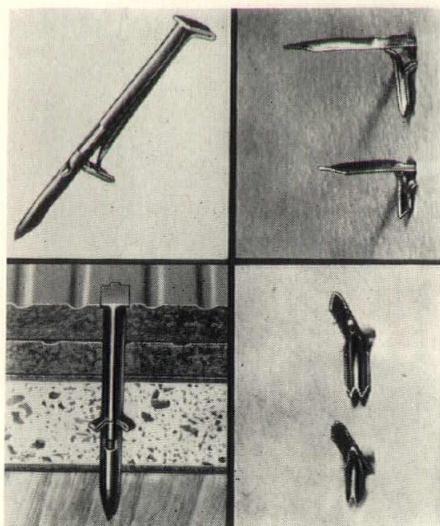
Prior 1087—Mi. 8388

photographs of stainless in use, visualizing for the designer a myriad of adaptations he can utilize in his own plans. In addition, the booklet shows stock parts available, details of planning for construction and other data valuable to the architect.

The publication was put out after consultation with the department of education and research of the A.I.A.

SELF CLINCHING NAIL DESIGNED FOR ASBESTOS APPLICATION

With a wider and longer locking foot, a new self clinching stainless steel ES-nail has been developed by the Elastic Stop Nut Corporation of America for face nailing asbestos



shingles to non-wood sheathing.

The nail also has fine holding power where driven into wood studs and sheathing. Design of the nail allows the head to flatten easily and completely, eliminating bulge. Many other features of the previous designs have been developed further to make the nails ever more adaptable to the requirements of the materials with which they are used.

Additional data can be obtained from the corporation at 2330 Vauxhall Road, Union, N. J.

PREFAB MAKERS HOPE TO DOUBLE 1950 PRODUCTION

A 1951 production of prefabs, sparked by housing demands in critical defense areas, which will double the 55,000 houses made "on the line" during 1950 is hoped for by the prefab makers, according to

ARCHITECT

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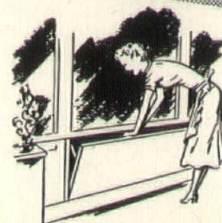


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AIR-FLO SECTION

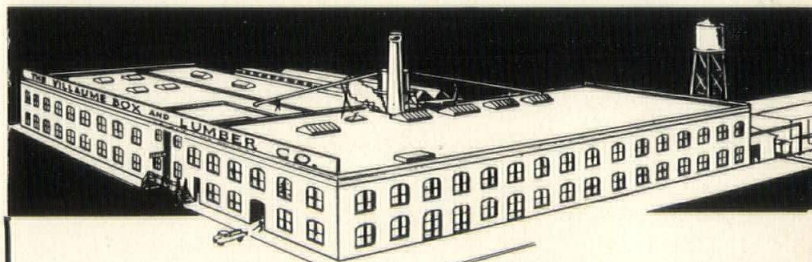
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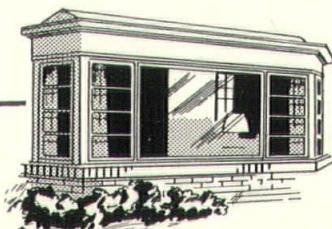
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**Pella CASEMENT
WINDOWS**

word from James R. Price, president of the Prefabricated House Manufacturers Institute.

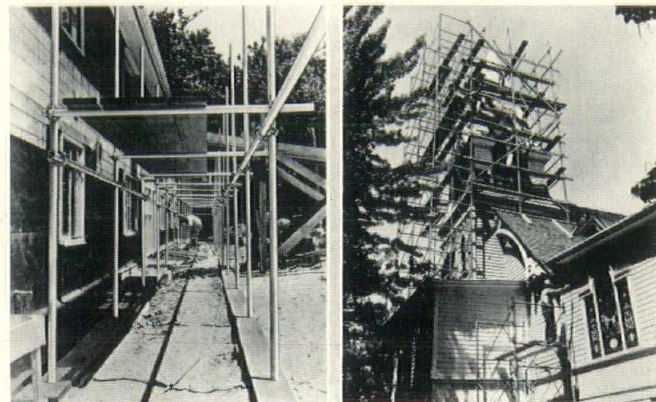
Mr. Price said the prefabs filled 5 per cent of the home building market last year and could triple that this year because of the restrictions on conventional house construction.

"Prefabrication," he said, "especially recommends itself to military-type housing."

CLAMPS AND TUBES BUILD SCAFFOLDING

A portable scaffolding easily erected even by unskilled workmen with aluminum or steel tubes and quick-acting clamps has been put on the market by Safway Steel Products, Inc.

Adjustability of the scaffolding is wide so even rough



ground and irregular building contours can be fitted. The scaffolding can be combined with frame-type scaffolding, also included in the Safway line.

Tubes come in 6-, 8-, 10- and 13-foot lengths, either steel or aluminum. Horizontal tubes are arranged both parallel and at right angles to the working surface and are used for platform supports. Uprights can be extended to as high as 200 feet with safety and diagonal bracing makes for rigidity.

Clamps are of two types—stationary for mounting at right angles and swiveling for meeting other clamping needs during erection. They are designed to be used with tubes of various diameters, grip fast and hold securely.

Address of the Safway company is 6234 W. State St., Milwaukee 13, Wis.

NEW OPEN STEEL FLOORING CATALOG IS- SUED BY DRAVO

A new catalog and specifications booklet of value to architects and designers who use open steelwork flooring in their buildings is No. 1103 of the Dravo Corporation's machinery division, 5th and Liberty Aves., Pittsburgh 22, Pa.

The catalog describes fabrication and uses of various types of Tri-Lok open steel floorings and safety treads and also contains specification data, safe load tables, installation methods and other information. Can be had by writing the company.

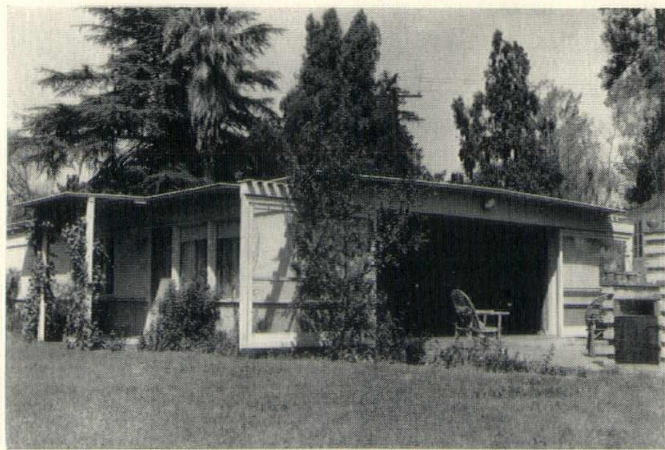
"Say It All!"

(Continued from Page 5)

feelings and enthusiasm of the public. His role is active; he deals with ideas not things. He is a prophet.

THERE IS QUITE A SPREAD between the current fashion phase in the Architectural profession and a society in which competent and alert designers would consciously set out to reshape their forms so that a humane architecture would say all that must be said, and can be said with buildings, as they offer living answers to the diverse needs of the human spirit.

BUILDING MATERIALS and the forms which result from their use, produce a wide variety of architectural words which can say much. Seemingly incidental forms become communication in buildings, without the designer even realizing it. To demonstrate this process one must use some simple example which can be easily understood by people who are not accustomed to thinking in architectural terms. For example, then, let us consider a building made of wood, because people are generally more familiar with such structures. Home owners enjoy going through a "frame" dwelling in the process of construction. They see the "two-by-four" studding which forms the supporting and enclosing walls; they understand the "2 by 10's" which are the joists to carry the floors; up above they see the "2 x 6's" which make the roof rafters. These members of wood, all something less than two inches in thickness, are easily visualized. At the same time, when people see these studs and joists they have, in the past, rightly assumed that this was but the framework or structural skeleton of the building. People knew that when completed there would be some enclosing material on the outside of these members to fend against the weather,



MENDOCINO HOUSE, Pasadena, described with plan in Vol. X, No. 4, Northwest Architect, 1946, W. G. Purcell, Architect. This building was also constructed with stressed-skin structural sandwich panels in 32" x 90" units, preformed complete with insulation. This variation of the glass wall, as a sliding enclosure, also had sliding screens. Photograph shows both screens and sliding glass wall pushed clear, so that the family room becomes actually a part of the paved patio with its outdoor fireplace, back of which is seen at right.

ARCHITECT



RALPH THOMAS HOUSE, Wayzata, Minnesota. Built 1916, Burned 1917. Rebuilt in exact duplicate and again burned in 1919. Total loss, both fires. This home with one end open floor to ceiling eight by sixteen feet, was enclosable by a sliding glass wall in two units. There were also removable storm sash and screens in 4' x 7' panels.

and some other surfacing material, usually plaster, on the inside, to form rooms to live in. Therefore, these 2 x 4's and 2 x 10's and 2 x 6's have come to speak several very well acknowledged words. The first is a verb, an architectural form saying "built," and the second an adjective, saying even more clearly to everybody, "incomplete." In the face of this rather obvious speech-of-building it seems surprising that popular architects continue to be almost morbidly candid in their eagerness to expose the intestinal anatomy of their buildings. Architecture is not a laboratory report. Expression of function in building forms may not be confined to the operations of engineering and economics.

LOUIS SULLIVAN, the original exponent in our era of function as the sole source of inspiration in Architecture, was not unduly concerned with construction and logic. On the contrary he said: "Architecture is the Great Life." In this larger life, of our better selves, are to be found the more important functions that architects should express first.

IN A REALLY very large amount of recent designing, the self-styled "functionalist," unaware of the true character of his listening audience and endeavoring to keep his architecture "pure," as he calls it, allows his 2 x 10 ceiling joists or more often the 2 x 6 roof rafters, to remain actually exposed to view. People enter the room, look up and see a long series of ceiling joists only two inches thick and spaced sixteen inches apart. Now this 16" spacing is in itself a very speaking "form-verb," for it recounts the days when it took three 16" spaces to provide nailing and come out even with a four-foot lath. Since this new era "modern" room we are thinking about is in a "frame structure" of wood, as likely as not the constructional 2 x 4's of the sidewalls will also be exposed, still sixteen inches on centers. Its "modern" designer will propose to fasten his enclosing weather-wall and its accompanying layers of insulation on the *far* or *out* side of the wall studs, and it is now the fashion to introduce no surface or room enclosing material on the inside of these wooden supporting members. He believes such a covering surface would conceal legitimate construction

and frustrate the candor of the design. Today a virtue is made of exhibiting these muscles and bones of the building, even when, *indeed especially when* made of rough, unplanned lumber.

WE HAVE EXAMINED one of the simplest elements to be found in buildings which are familiar to everyone. We are now in a position to appraise these members as forms-in-action. We want to see the "shape of these acts," understand forms-at-work as the speech of architecture. We want to experience "What a building does to you" as we benefit from the use of it, as we live with it and become familiar with it.

THERE ARE MANY IDEAS that a designer can and should communicate to us. But regardless of what he *intends* to say with the materials in rooms such as we have described above, he is *actually* saying, without realizing it, that "*this room is not yet completed.*" People logically expect, when they see 2 x 4 studs sixteen inches on centers, that this wall is *going to be completed* in some way, probably with lath and plaster. They are justified in so interpreting these "words-

which-are-building" because the sixteen inch dimension, while providing a convenient supporting interval, is at the same time, *communicating* a very definite constructional story about those four-foot-long laths. It is somewhat like the old Roman cart that still is with us in the gauge of the modern railroad, excepting that this construction record is in plain sight.

Now turn from the designer's obligation to those who use buildings. They must learn form-language through use and resulting experience. They become confused between what the parts of buildings are *actually doing* and what these parts are made *to say* that they are doing. People are thus unaware of the many ways in which living, and beautiful but as yet strange, forms could be going to work for their comfort and happiness. They become excitement seekers who lack normal judgment. They are unaware of the consequences that may burst from naive actions. So as buyers of ideas and of things, they make capricious "style" demands on designer and manufacturer. This cycle of negation has thus in important ways become misrepresentative of the most useful and precious values in life, not only in America but the world around. People are stopped from expressing their collective goodness. Their native genius becomes submerged.

FUNCTION means the natural effective or characteristic action of anything. It means special purpose, office, duty. Certainly all of these terms can hardly relate entirely to the mechanical or material characteristics and purposes of any enterprise, but must be assumed to include the mental, emotional and moral values as well.

WE HAVE SEEN why it is that the "modern" architectural designer is often unaware that every move he makes is also conveying ideas quite outside the world of construction and mechanics, which for the moment absorbs his attention. And this is true not only in the simple frame building of wood, but all building materials—glass, masonry, metal, plastics, and so on, supply similar instances. The designer by mistaking or ignoring what a given form is actually saying, sets in motion, in the minds of the users of building, snowballing mass attitudes toward the architectural art, which heap error upon error.

What should the designer do in such cases? Should he cover the construction with a plaster surface, or with board panels? Should he dress up the system with mouldings, or paint, or abandon the whole system? Certainly none of these things would provide any logical answer because the issue as we wish to analyze it for you here, *has nothing to do* with the relative aesthetic merits of rough or finished material, or with a philosophy comparing the sincerity of the design factors in exposed or concealed construction, but is concerned only *what is communicated* by the *substance, form and action* of what it seen, and made use of in buildings.

The only issue, "Mr. Architect" is to "say it *all*." Be sure that what you say is the whole of what you intended to say. Will your audience be able to "see" what you say? Will they even come to understand your form-words? It is, of course, possible for people to become inured to a form-clatter dinning in their eyes, and with "modern" art everyone must accustom his

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eyes to a lot of that. But one should not be forced to put up with it, at least not on the public streets.

For those unaccustomed to designing the parts of buildings I can perhaps point the problem with a few practical illustrations, showing how building materials, ordinarily misrepresented, can be very easily and simply restated with entire candor and consequent economy.

(A) FOR THE TWO STORY LOCKWOOD VACATION DWELLING at Hayward, Wisconsin, in 1916, nothing but two inch lumber could be had. So we doubled all studding, joists, and rafters in pairs. Each pair had a 2" x 3" nailed between the inner edges making structural box-beams, joists and posts. The flooring or weatherboarding held firm the outer or upper edges, thus completing the box-beam or post. This increased the unit strength so that these members could be spaced 32" o. c. and left as finished work. Thus was born the 32" dimensioning module for the working drawing and all its details, windows and doors and so on. This was one of the earliest try-outs of the now common uniform "module" planning base as an improvement over the old "feet and inches" systems of figuring plans, establishing room sizes, etc. House is still standing.

(B) IN THE POSSUM HOLLOW HOUSE OF 1918 at Rose Valley, Pa., illustrated in "Northwest Architect," Vol. VI., No. 4, March, 1942, we used 4" x 4" to 4" x 8" solid cypress beams planed and sanded, with smooth cypress board for enclosing material showing inside and outside. The satiny beams and panel boards were all in sight, but certainly it occurred to no one that this was incomplete. A very popular house both to the builder, craftsman, and to 32 years of owners. These were honest beams, a great novelty in the days of fake "beam-ceilings." The house is still standing.

(C) IN THE BANNING VACATION COTTAGE, of 1923, illustrated in the "Northwest Architect," Nov.-Dec., 1941, Vol. VI., No. 2, the constructional unit was a 2 1/4" sandwich composed of insulation between two boards 3/4" thick. This fitted into grooves in a 3" x 2" vertical structural member every 12 1/2 inches which appeared as a batten outside. Thus the normal "skin" of the building was at the same time the structure. A number of finishes were employed inside, related to the uses of the various rooms. This was an early experiment in stressed skin construction. Full credit to Van Evera Bailey for his co-operative ingenuity in successfully developing this idea. House still standing, beautifully lived in.

(D) VAN EVERA BAILEY HAS ALSO JUST DEVELOPED a laminated slab construction built up of low cost mill-waste 2" x 4"s nailed solid. This slab serves at once as both structure and finish for walls, floors, ceilings and roofs. The appearance, like corduroy, is very fine, with structure, enclosure, insulation, "finished" surface, "all-in-one-package"; single handling placement; very economical in all material and labor; uses minimum of war-demand materials.

THERE ARE AS MANY MORE WAYS of speaking plainly with every variety of building material as there are buildings and builders because the base requirements are not some novel idea or personal formula, but only that:—

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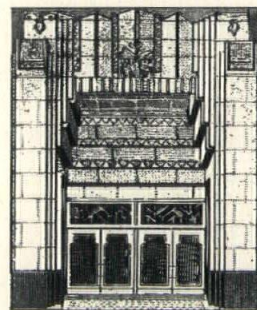
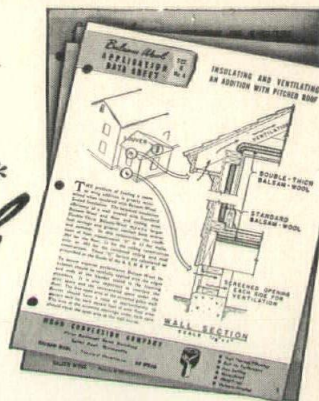
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You make your form words say successfully what is in your mind.

You transfer your idea to your architectural beneficiaries . . .

Here lies the "all" of this missionary effort of mine. The "beautiful necessity" spurs the creative impulse to

transfer something *that-will-work* to some one *who can work* it. Let's get into no debates about how to design a building, or what constitutes valid "design" — just "Say it all! Mr. Architect," but don't make cults out of some passing theory or fashion. If "everybody's-doing-it" it is likely to be of small value and "they" will soon be doing something else.

The "Form and Function" relation is not ordinarily thought of as a reciprocating action. The idea-operation-sequence continuity produces a form-in-action which, observed for results, germinates further ideas which produce in turn another living cycle.

Thus one cannot discuss mechanical or operational functions without taking into account the intelligent and experienced mind of some man, who initiates practical daily use of the ideas by trial and success, and thus furthers the process. By such living continuities-in-sequence, concerned with (1) thought, (2) practice, (3) review, (4) conclusion, (5) performance and progress, we arrive at the classic "form and function" definition which says that this relation is "any quality, trait, or fact, so related to another, that it is dependent upon and varies with that other." Making use of a tool or building is also much more of a fact than the tool itself, and such action-in-use has traits and qualities as any athlete can prove. Let's get off this static *noun* side of life, and get to work on the *verb* side. Let's try to understand the restive realities that can't be stabled in a book or bank.

What has happened to all of us here in the architectural world, is that a material-minded generation has become preoccupied with what we might call the "gadget" aspect of machinery. People want to live in a push-button world. The entire area of human activity concerned with thoughts, feelings and aspirations has been pushed to one side as if it did not exist, and the expression of our building world has been given over to registering a specialized mechanical aspect of modern life. The word "functional" has been forced into a new strait jacket of meaning.

WE ARE NOT THINKING IN METAPHORS in this piece when we continue to refer to the "speech" of architectural forms, or the "shape" of acts. This you may have felt to be a bit poetic. But the most practical of you say "Actions SPEAK louder than words." You use words that way every day. We architects, who should know better, are not alert to the death of this word function which, like lead which is the ashes of radium, becomes daily less of a verb and more of a noun.

WHEN YOU HEAR people discuss "functionalism," or see the word used in book or press, you know before the idea is more than stated, that the writer is going to be concerned with the mechanical inter-relations of a given building or object with itself, or with its *mechanical* convenience in relation to people and society. You will find them unconcerned with those social functions, for example, which must be operating before such objects can even be produced. They will also be unworried by the functions which demand acknowledgment as soon as the completed material form, or its working in the world, is ready to serve mankind.

A good example are the new form-fitting chairs which

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faithfully reproduce the static shape of the material human body, but disregard the meaning-in-action of the verb "to sit." Here is a clear illustration of the growing insulation from actual life of the most widely applauded product of the contemporary designing mind. The function of "chair" cannot be confined to the *form-of-the-human body* but is more importantly related to the *form-of-the-act-of-sitting*, as including all the varieties of posture, active and potential. It is simply impossible "to sit" in these so-called functional chairs. In *any* chair you can *sit still* but for a very few minutes. These *new* chairs, however, do not provide for the constantly changing sequences of sitting. There is no normal and very necessary recurrent release. They are not functional in any sense and they are not modern. They are not scientific, but really more "style form" than the dainty and really functional Louis XV French types of chairs, on which the silk-pants of that period could still do a lot of artful sitting.

THE MOST IMPORTANT intellectual job we have today in bringing back a full expression of life to architecture, is to restore the full meaning and content to the word "functional." "Say it all." Communication is LIFE. The loss of good manners is only one of our contemporary corruptions.

PERHAPS ONE WAY to do this would be to insist on the use of the word "constructivist" or "constructional" when we are talking about the relation of parts, one with another, within a structure, and to use the word "operational" when we are referring to the way in which those parts perform in order to serve their mechanical purpose. This would begin to free the word "functional" so that it could really serve our thinking as we consider all the broad and beautiful ways in which architecture has served the finest aspirations of mankind and in which it should and must continue to serve him. Our best thinkers say that we have preoccupied our minds so completely with investigations of the mechanics of life and the machinery of transportation, trade, economics and so on, that we lost the power to really make these new world conveniences serve us in the absolutely essential art of how to live together happily and peacefully.

Here certainly is a vivid picture of the force of thought handling an implement which is "communication" beyond and outside vocal speech. Here is plainly shown the long trail of futility, disillusionment and imprisonment of the spirit which can result from the twists of plain facts, when a word like "function" to describe them has been appropriated by people with a limited or self-centered view of life's possibilities.

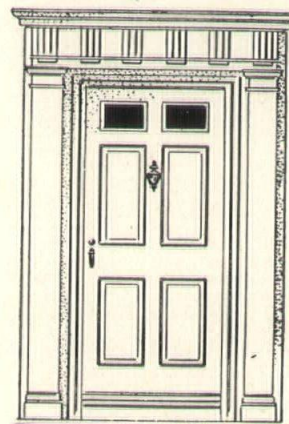
For backward, Duddon, as I cast my eyes
I see what was, and is, and will abide.
Still glides the stream, and shall forever glide,
The form *remains, the function never dies

—Wordsworth

* "Remains" in the sense
of "the remnant," the corpse,
the empty shell of former living.

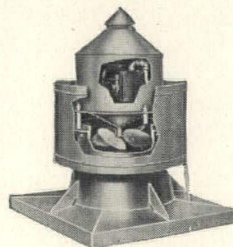
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♦ Price Wage Control ♦

Oh, Mr. Baruch, stay with us!

OF WHAT VALUE is the "control of prices and wages" if QUALITY remains unestablished. The commodity price index has no real relation to the cost of living, unless the price is related to both standard quality and to normal dealer service as formerly supplied. There was scarcely a commodity under "price control" for which the three factors, A, quality; B, service; C, distribution was not juggled to create

up to 100% added profit. And we still suffer beneath this walnut shell game.

Example: We bought sheets at a "sale!" last week at \$4.25. In 1940 we bought excellent quality sheets at \$1.85 to \$2.10. These \$4.25 sheets with very impressive gold trademarks are nothing better than filled and processed flour sacking.

Here is a doubling of the price and a halving of the quality, a 400% change in living costs, in a market which the financial reports give as only a "73% average rise since 1936-39." The housewife knows better, she not only sees the bills, she has to deal with the product.

♦ Less Said The Better ♦

Or Plenty of Scenery makes the Play

VINES bear the same relation to architecture as sod does to the work of the physician.

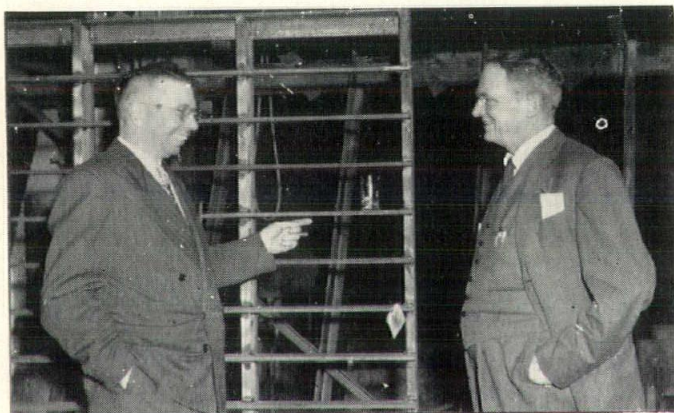
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STANDARD IRON AND WIRE SHOWS PLANT TO CUSTOMERS

Architects and contractors were given a chance to see the plant of the Standard Iron & Wire Co., Minneapolis fabricators, in operation at a seasonal party held in the office and plant this winter.

The affair was a kind of "delayed grand opening" for the building after its remodeling some time ago. The guests arrived early enough so they could see the fabrication machines in operation before normal closing time, then stayed on for a buffet dinner.

Shown here are pictures of the plant and those who inspected the machines.



H. Z. "Heinie" Demeules, Standard president and general manager, is shown at the left explaining to Harry Lovering of Lovering Construction Co., a bar screen to be used in the Blakley Mountain Dam near Hot Springs, Ark.



Final details of a large bin being fabricated in the plant are discussed by (left to right) Gerald Oberuc, designing engineer, Ken Anderson, Standard's chief estimator in the engineering department, B. F. Hillstrom of McKenzie-Hague-Simmons Co., and E. R. Lambert of Associated General Contractors.



A staircase railing presents many mathematical problems even before its metal is started into shape and above is a group hearing about solution of these problems—(left to right) R. W. Giertsen of Walter Giertsen Co., T. D. MacKenzie of Johnson, Drake & Piper, Inc., E. A. Demeules, Standard's vice president and shop superintendent, A. M. Lande of Johnson, Drake & Piper, Inc., and A. P. Fisher of Walter Giertsen Co.



Blueprints covering the shaping of a series of risers and treads are explained before the huge shaper in this picture. In the usual order are P. H. Stahr and R. B. Stahr of The Stahr Company, J. A. Memeules, Standard's secretary and manager of production control, C. W. Swanberg of G. F. Cook Construction Co., and Maurice Johnson of Standard.

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IN ANSWER TO A QUESTIONNAIRE BY
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 NOW "BUILDING"

(See issue of November, 1950.

July 25, 1950

Douglas Haskell
 Editor

Architectural Forum
 New York City

Dear Mr. Haskell:

Not having seen the U.N. buildings myself, I shall have to answer your questions by reacting to your pictures and articles.

The "monumental character" of the U.N. group? It is non-existent. Monumentality is the result of a relationship between architectural forms based on one architectural idea. The U.N. group shows no evidence of such an architectural idea. The Secretariat is a geometrical shape covered with geometrical patterns, and its enlargement does not convey monumentality but size.

The buildings prove the complete failure of what you call the "architectural collaboration" out of which they were born. Ideas can not be manufactured and the mixing bowl will never replace the womb.

The lack of architectural grip, partly due to lack of individual responsibility, could not be better illustrated than by this group of heterogeneous buildings, including (sic) the architectural pun which seems to represent a porte cochere.

Your article in the May issue tries to come to the rescue through poetry-coated salesmanship. But why should a roof constructed of steel and other solid material supported on walls and columns take "the shape of a tarpaulin suspended on four corners?" That is expensive architectural nonsense.

The hour-glass shape first proposed for the general assembly had meaning while it contained two auditoriums. But it is again architectural nonsense to emulate the Victorian corset and conceal the most important assembly room in the world behind a constricted waist-line. What's wrong with a healthy belly?

Answering your question about the irregular width of the bays on the Secretariat, I would say that since this cannot conflict with a non-existent architectural idea it is of no importance. In mathematics any number and any dimension is as good as any other one. The glass wall cannot even be justified on a functional basis since the same design is used for the west and east front of the building, for bottom and top floors and for all the varied rooms behind it.

Let's hope that the U.N. buildings are the final apotheosis of the approach to architecture called the "International Style," and that we will finally realize that $1+1=2$ is only true in mathematics, but that in nature and art $1+1$ must become 3.

Sincerely,

R. M. SCHINDLER

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EDITOR FRIDLUND RETURNS TO PRIVATE PRACTICE

H. W. (Hal) Fridlund, editor of **NORTHWEST ARCHITECT**, has returned to private practice of architecture in Minneapolis, resigning his post as chief architect for the FHA in Minnesota.

He has opened general architectural offices at 424 Second Ave., So., Minneapolis, where he will carry on



Mr. Fridlund

a general practice in building design and have his headquarters. Hal, registered in Minnesota and a member of the American Institute of Architects, had more than a score of architects under his direction in the FHA offices. While with the FHA he also made his headquarters in Minneapolis.

He has been active in affairs of the **NORTHWEST ARCHITECT** since inception of the magazine and as editor has directed it toward an all-inclusive pattern of the varied trends in Northwest architecture.

LEGITIMATE THEATER

(Continued from Page 17)

planned for visibility, decoration and mood. Architectural decoration must be minimal and simple to prevent detracting from the stage picture. Floor slope is determined primarily by the best sight lines. The back row of the house should not be farther than seventy-five feet from the stage to insure good visibility.

AUDIENCE-STAGE RELATIONSHIP

In a building designed for a commercial legitimate theatre, it would be unwise to attempt any radical changes in the audience-stage relationship such as arena type seating. Likewise, since almost all the shows will originate in New York and be designed for the stages there, it would be impractical to attempt revolutionary changes in the stage house design. However, it is desirable to increase the feeling of intimacy between actor and audience. It is suggested forming the proscenium opening only by the termination of the auditorium walls and ceiling, with provision for masking the opening down to suit any production. This masking might be accomplished by a framed Teaser integrated with the flying light bridge and the framed Tormentors integrated with light towers. Further intimacy could be achieved by such flexible contact between the audience and the stage as ramps, stairs and the stage apron.

At each side of the auditorium there should be a stage door at the stage level linked to the stage by a small landing or side stage and to the house by steps leading down to the floor level. The old stage box might well be introduced above these stage doors. The boxes could be used in any revival of plays requiring them and, when not used for the stage work, they might well be utilized for radio and television control booths since they are close enough to the stage to permit cueing of the actors on stage.

ORCHESTRA

The orchestra pit should consist of a series of table elevators which may be lowered below the house level for use by the orchestra, or raised to the house floor level to provide additional seating, or raised in sections to form stairs up to the stage, or raised entirely to stage level to provide a broad stage apron.

Orchestra Pit Area—300 square feet.

THE STAGE

"A stage is a space on which a dramatic action is to be revealed before an audience. Whatever the space at the builder's disposal—its size or shape—or whatever the building he must remodel, that is the only thing to be considered. A play is to be given. The players must be seen and heard. There must be means for them to enter the presence of the audience and exit. The space on which they appear must be illuminated. Somehow the space set aside for the player shall be able to suggest, either by means of scenery as it is commonly understood or by some conventional arrangement, permanent or variable, a world in which the character he portrays might move."

—Irving Pichel

The stage area is divided into three parts: the acting area, the scenery space and the working and storage space.

The acting area varies considerably with the type of presentation. An area of 40 feet wide by 20 feet deep should handle almost any production to be presented in this theatre. The entire acting area and a border of 4 feet around it should be completely trapped in 8 feet wide and 4 feet deep units. This allows a trap elevator or stairs from below the stage to be located anywhere desired.

Very few shows are designed in the commercial theatre for a revolving stage. It would thus be implausible to include a permanent turntable on this stage: a portable turntable could be used if the production required. Provision for tracks and stage wagons on which an entire set could be set off stage and rolled on to change the setting in a matter of seconds might prove advantageous.

An area of from 5 to 10 feet surrounding the acting area is used for scenery space. It encloses and delineates the acting area, supplies openings for the actors to enter and leave the acting area and masks the stage walls, machinery, crews and actors waiting backstage.

Behind the scenery space should be 10 to 15 feet to the cyclorama to allow for adequate lighting of the set, backdrops and cyclorama. From 5 to 10 feet behind the cyclorama should be provided for passage from one side of the stage to the other.

A cyclorama is used to supply ultimate scenic background and ultimate masking. Hence it must mask the entire stage space as determined by the extreme horizontal and vertical sight lines. Its shape must permit uniform and adequate distribution and color mixing of light over its entire surface. There must not be any curve of radius less than 12 feet in plan or section. To facilitate movement of scenery from the wings, a canvas cyclorama rigged to fly is desirable.

The wings should be at least half the width of the acting area on each side of the proscenium and preferably the full width of the acting area. This area is used as work space and storage of scenery and assembly area for chorus and actors about to enter the acting area.

The floor of the stage should be of soft wood to permit ease in inserting hand driven stage screws to brace scenery. There should be four to six light pockets running up and down the stage on each side of the proscenium. These are outlets used for plugging in lighting equipment to the switchboard.

THE FLIES

Equipment over the stage is used for the suspension and flying of scenery and lighting equipment. The fly space must be adequate to fly a 30 foot backdrop without overlapping a second 30 foot drop in use, or about 75 feet to the underside of the gridiron from the stage floor.

The gridiron is the open work floor of steel located under the roof of the stage on which sheaves may be fastened and through which ropes may be dropped for the suspension of scenery and lighting equipment, and perhaps actors. There must be a minimum of 7 feet clearance between the grid and

the underside of the roof beams to permit stage workers to move about with ease. The total fly space is approximately 90 feet above the stage floor.

FLY GALLERY

A steel bridge for operation of the fly system should be located on one or both sides of the stage at a height of 20 to 30 feet above the stage floor to permit stacking of scenery under the gallery or the movement of set-up stage wagons beneath.

The counterweight system for flying the scenery is to be employed, it is safer, more dependable and longer-lived than the rope and sand-bag system. A loading platform for adding weights to the counterweight carriages must be provided between the grid and the head block.

STAGE MANAGER

The stage manager's desk is the nerve center of backstage signal system containing call system, monitors, stage controls, etc. He should have a glassed-in booth on the working side of the stage capable of being light and sound proofed with clear vision of the acting area and wings.

ADDITIONAL BACKSTAGE REQUIREMENTS

A **LOADING DOCK** should be directly accessible to the stage, at the same level as the stage and with no corners to negotiate to reach the stage. An internal dock is preferred but an exterior dock if adequately covered will suffice. The dock area must be wide enough to accommodate two vans. There should be an 8 by 12 foot door for scenery with a receiving area of 200 square feet at least 20 feet high. There should be a separate receiving door for properties and lighting equipment with a 200-square-foot area for receiving.

A **VESTIBULE** with a bulletin board and telephone should be located centrally to all backstage departments. Minimum area is 50 square feet.

DOORMAN'S BOOTH with counter, mail box, desk and key rack should be adjacent to the vestibule. Minimum area is 30 square feet.

MANAGER'S OFFICE is the headquarters for the show's manager. It should contain a desk, files and a telephone. Minimum area is 100 square feet.

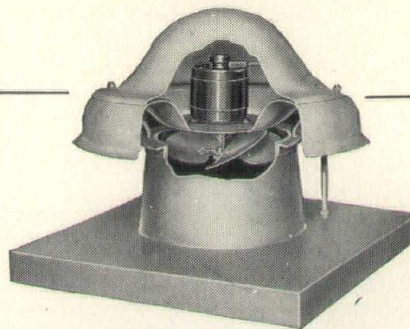
DRESSING ROOMS—4 star's dressing rooms should each contain 2 feet of clothes rod and 2 feet of shoe rack, a make up table 30 inches wide and 18 inches deep and 18 inch mirror above the table, a full length mirror, one basin, one shower and one toilet. Minimum area is 8 x 12 feet.

Eight double principals' dressing rooms should each contain 4 feet of clothes rod, 4 feet of shoe rack, 2 make up tables 30 x 18 inches, 2—18 inch mirrors above the tables, one full length mirror, one basin, one shower and one toilet. Minimum area is 10 x 12 feet.

Two chorus dressing rooms should each contain 40 feet of clothes rod, 40 feet of shoe rack, 50 linear feet of 18 inch deep make up table, 20—18 inch mirrors above the tables, 3 full length mirrors, four showers, four toilets and 5 basins. Minimum area for each is 1,000 square feet.

GREEN ROOM is the actors' lounge area adjacent to the stage. It should contain lounge furniture, smoking accessories,

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tables, a full length mirror and a call system. Minimum area is 300 square feet.

QUICK CHANGE DRESSING ROOMS are either on or immediately adjoining the stage. The minimum area is 50 square feet.

MUSICIANS' ROOM is located at the basement level near the orchestra pit and the stage. It contains lockers, chairs, music cabinets and a call system. Minimum area is 300 square feet.

STAGE HANDS' ROOM is located near the stage and contains lockers, chairs, benches, smoking facilities, a call system, toilets and six showers. The minimum area is 300 square feet.

FIRST AID ROOM is also located near the stage. It contains a table, stools, chair, first aid cabinet and a sink. Minimum area is 50 square feet.

WARDROBE ROOM should be located near the dressing rooms. It contains 12 feet of costume hangers, an ironing

board and iron, an electric ironer, a sewing machine and a table. Minimum area is 200 square feet.

REPAIR SHOP is used to repair damaged scenery. It contains a work bench and tools for working wood, tin, iron and provisions for sewing, painting and electrical work.

PROJECTION BOOTH

This should contain space for four projection machines and should be located at the high rear wall of the auditorium. In addition there should be a film vault containing a splicing table, a rewind machine and a film rack.

LIGHTING CONTROL BOOTH

This contains the control board for both the stage and house lighting. It should be located either under the apron or at the rear of the main floor or balcony. Inter-com system to back-stage.

SOUND CONTROL BOOTH

This is an open booth containing sound control equipment. It is located at the rear of the main floor or balcony. In the latter case there should be direct access to the projection booth.

LIGHTING EQUIPMENT

Since a touring show troupes all its own lighting equipment, only a minimum must be provided for whatever local shows may originate in the theatre and even this equipment may be rented from local scenic supply studios for the occasion. However, it is most important that there is plenty of space allowed for mounting the lights that will be brought in and adequate circuits to set them up on. Provision for mounting the beam lights to illuminate the forestage must be made either on the balcony front or by a lighting slot in the ceiling about $\frac{2}{3}$ of the distance from the stage to the back of the house. This slot should preferably extend down the walls of the auditorium. A follow-spot booth may be incorporated with the projection booth. If footlights are desired, they should be the disappearing type and located in the forestage. Other beam lights, borders, spots and floods are located either on the floor of the stage, suspended on pipes from the gridiron or mounted on light towers in the wings.

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Dr. Frank W. Whiting, director of the University of Minnesota Theatre
Miss Sally-Ross Dinsmore, Costume and Scenic Designer, M. F. A. Yale, Former Scenic Technician, Yale Drama School
Mr. J. T. Scott, Northwestern Costume House
Former Vice President and Production Manager of North Star Drama Guild, Inc.
Mr. Harry Katz, former business manager, North Star Drama Guild
Mr. Victor Caveness, director-instructor, Twin City Television Lab

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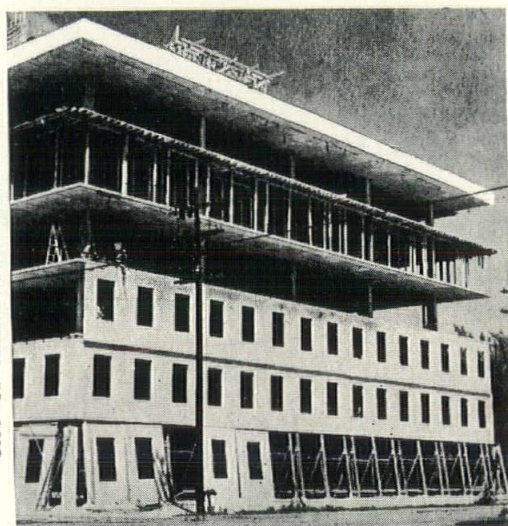


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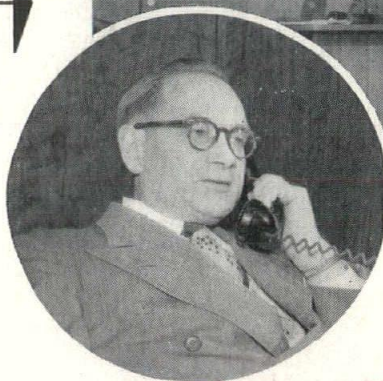
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